

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF: Tomio ONO, et al.

SERIAL NO: NEW APPLICATION

GAU:

FILED: HEREWITH

EXAMINER:

FOR: MICROSWITCH AND METHOD OF MANUFACTURING THE SAME

**INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97**

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

**REFERENCES**

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☐ A check is attached in the amount required under 37 CFR §1.17(p).

**RELATED CASES**

- ☐ Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together with a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- ☐ A check is attached in the amount required under 37 CFR §1.17(p).

**CERTIFICATION**

- ☐ Each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

**DEPOSIT ACCOUNT**

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment form is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
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Form PTO 1449  
(Modified)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY DOCKET NO.  
242814US2SRDSERIAL NO.  
NEW APPLICATION

## LIST OF REFERENCES CITED BY APPLICANT

APPLICANT  
Tomio ONO, et al.FILING DATE  
HEREWITH

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
	AQ					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Paul M. ZAVRACKY, et al., "Micromechanical Switches Fabricated Using Nickel Surface Micromachining", JOURNAL OF MICROELECTROMECHANICAL SYSTEMS, Vol. 6, No. 1, March 1997, pgs. 3-9
	AX	S. ERTL, et al., "Surface Micromachined Diamond Microswitch", DIAMOND AND RELATED MATERIALS, Vol. 9, 2000, pgs 970-974
	AY	M. ADAMSCHIK, et al., "Diamond Microwave Micro Relay", DIAMOND AND RELATED MATERIALS, Vol. 11, 2002, pgs. 672-676
	AZ	

☐ Additional References sheet(s) attached

Examiner

Date Considered

\*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

DOCKET NO: 242814US2SRD

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**STATEMENT OF RELEVANCY**

**Reference AW on Form PTO- 1449:**

This reference shows typical micromachined microswitch structure (Fig. 1.) and fabrication process (Fig. 2.).

**Reference AX on Form PTO- 1449:**

This reference shows diamond microswitch structure (Fig. 1.) and fabrication process (Fig. 2.). In this reference, it was reported that no sticking was observed.

**Reference AY on Form PTO- 1449:**

This reference shows diamond microswitch structure to reduce contact resistance (Fig. 2.). But diamond contact is mechanically weak and reduction of contact resistance is insufficient.